In the Claims:

1. (Original) A nanotextured biocompatible composite, comprising a biocompatible substrate, a calcium phosphate component on such said substrate; and a nanotextured mineral phase on said calcium phosphate component, said mineral phase comprising calcium phosphate and poly(L-lysine).

2. (Original) The composite of claim 1 wherein the calcium content of said mineral phase is less than stoichiometric, and said poly(L-lysine) is incorporated within said calcium phosphate.

3. (Original) The composite of claim 1 wherein said mineral phase is reactive with at least one of an acid and degradative enzyme.

4. (Original) The composite of claim 1 further comprising nanofibers of peptide amphiphiles coupled to said poly(L-lysine), at least one of said peptide amphiphiles comprising a carboxy functionality.

5. (Original) The composite of claim 4 wherein at least one of said peptide amphiphiles comprises an RGD sequence.

6. (Original) The composite of claim 4 further comprising a mammalian preosteoblast cell culture.

7. (Original) The composite of claim 1 wherein said substrate comprises titanium.

8-20. (Canceled)